

Chapter 3 - Affected Environment and Environmental Consequences

3.1 Introduction

This chapter describes the environment affected by the No Action and the two Action Alternatives. It also identifies potential effects from these alternatives. These effects are discussed under the following resource issues: recreation; water resources; water quality; public safety, access, and transportation; visual quality; socioeconomic resources; cultural resources; wetlands and vegetation; wildlife resources; threatened, endangered, candidate, and state sensitive species; Indian trust assets; and environmental justice. The present condition or character of each resource is discussed first, followed by a discussion of the predicted effects of the No Action and Action Alternatives. The environmental effects of the alternatives are summarized in a table at the end of this chapter.

3.2 Affected Environment

3.2.1 Recreation

Recreation management at Scofield Reservoir is performed by the Utah Division of Parks and Recreation under agreement with Reclamation. Scofield State Park is both a summer and winter recreation destination. It is situated 7,600 feet above sea level in the Manti-LaSal Mountains of the Wasatch Plateau. The 2,800-acre reservoir offers excellent boating and year-round fishing. During winter months, the area serves as a base for snowmobiling and cross-country skiing in spectacular mountains surrounding the park. Managed recreation season is May through November with high use on holidays, weekends, and during the winter months of ice fishing.

Visitation at Scofield reservoir has remained slightly above 100,000 visitors per year (Recreation Use Data Reports) since 1993. Monthly summer season data from 1995, provided by the Utah Division of Parks and Recreation, suggests that July is the most popular month for visits (21 percent of the total visits), followed by August (18.5 percent), June (16 percent), and September and May (approximately 13.0 percent each).

A 1995 summer survey by the Utah Division of Parks and Recreation suggested that the “constructed average visitor” to Scofield State Park is 52-54 years old and comes to the park with one other adult and one child to fish. The survey also suggested that more than one-half (54%) of the visitors surveyed arrive at Scofield State Park early in the summer and plan five or six additional visits during the remainder of the summer. This average visitor arrives in the morning and stays for about eight hours. They originate from Utah, Salt Lake, or Carbon County and would prefer Strawberry Reservoir as his second choice.

Primary Jurisdiction Zone

The Primary Jurisdiction Zone (approximately 90 acres) encompasses the area around the dam and its adjacent water operations facilities. In order to be able to operate and protect these

facilities, Reclamation and the CWCD control or restrict public uses. Below the dam, a controlled access road exists near the right abutment of the dam. It provides private access east of the Primary Jurisdiction Zone. Vehicular access through the left abutment area allows access to the fisherman parking lot at the foot bridge below the dam in the Primary Jurisdiction Zone. This access, the parking area, bridge, and a vault restroom allow for down stream staging of day use angling activities.

Recreation Opportunity Spectrum Class

The types of recreational opportunities existing at Scofield Reservoir which supply preferred activities in various settings are identified through the Recreation Opportunity Spectrum (ROS) System identified by the Scofield Resource Management Plan (RMP) (U.S. Bureau of Reclamation, Department of the Interior 2001). The system describes a spectrum of primitive through urban experiences that a visitor could have when visiting any specific management area.

The ROS classification for the Primary Jurisdiction Zone is “Urban”. The “Urban” classification typically indicates a high degree of visitor regulation. Reclamation and the CWCD regulate public access in the Primary Jurisdiction Zone to protect water operations and facilities. Public recreation/access may be prohibited or restricted within the Primary Jurisdiction Zone as stated on page 3-59 of the RMP, “Manage to benefit water operations and to protect the dam for safety purposes. Restrict use of the area to those permitted by the CWCD and Reclamation. Allow angler day uses in appropriate areas which are compatible with protection of water quality and delivery, and with the operation and safety of the dam.”

3.2.2 Water Resources

The Scofield Project provides a water supply for irrigation of 20,050 acres of highly developed farmlands in Carbon County, as well as a domestic water supply for the cities of Price and Helper, Utah.

The CWCD is responsible for the repayment of construction costs associated with the Scofield Project, which includes the dam and reservoir. The CWCD administers the delivery of water stored in Scofield Reservoir to its shareholders, comprised of irrigators as well as municipal water districts. These water deliveries add significant benefits to irrigated lands within the project area, and provide a critical water supply to much of Carbon County.

3.2.3 Water Quality

Scofield Reservoir and the Price River below Scofield Dam are classified by the State of Utah for the following beneficial uses:

Class 1C – Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water.

Class 2B – Protected for secondary contact recreation such as boating, wading, or similar uses.

Class 3A – Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.

Class 4 – Protected for agricultural uses including irrigation of crops and stock watering.

Scofield Reservoir is included on Utah's 303(d) List of Impaired Waters due to being impaired for Class 3A, cold water fishery. Parameters of concern are total phosphorus concentrations, low winter dissolved oxygen (DO) concentrations and nuisance algal blooms. A Total Maximum Daily Load (TMDL) analysis was completed in 2000, to bring Scofield Reservoir into compliance with its designated beneficial use category, Class 3A.

Scofield Reservoir is also included in Category 5D on Utah's 2004 303(d) List of Impaired Waters, due to high pH levels; however the remedial actions included in the TMDL completed in 2000 for dissolved oxygen and total phosphorus should also reduce pH.

3.2.4 Public Safety, Access, and Transportation

The Wasatch Plateau with forested mountains ranging over 10,000 feet is a picturesque area that has experienced significant growth within the past few years. Principal towns include Price (county seat), Helper, and Scofield Cities. Major highways serving the county include U.S. Highway 6 and SR-96. U.S. Highway 6 extends from Utah County northwest of the dam to Interstate Highway 70 west of Green River, Utah. SR-96 extends from U.S. Highway 6 northeast of the dam, crosses the dam and ends at Clear Creek, Utah south of the City of Scofield (Appendix A, Map 1).

3.2.5 Visual Quality

Scofield Reservoir is situated at the eastern edge of the Wasatch Plateau in the northern end of Pleasant Valley. The enclosing mountain slopes visually frame Pleasant Valley and other similar adjacent valleys. Mountain slopes are covered with a patchwork of sagebrush communities, quaking aspen groves, and conifer forests. Pleasant Valley is distinguished from the several other valleys by the inclusion of Scofield Reservoir. The introduction of Scofield's otherwise scarce water element into the Pleasant Valley landscape creates a cool, reflective, water-oriented respite that enhances the visual variety of the natural appearing landscape character. At high water, the large placid water impoundment is visually dominant.

Primary Jurisdiction Zone

Due to the existence of the dam and its recent stabilization work, much of the Primary Jurisdiction Zone appears to have been substantially modified by man. Recreation improvements above the fishing bridge include a vault restroom, parking lot, and gravel access road. Downstream from the fishing bridge, the viewshed is that of an intimate, natural appearing, river/stream character.

Visual Management Objective

A Visual Quality Objective (VQO) was established by the Scofield RMP (page 3-60) for the area around the dam and it is classified "Maximum Modification". Maximum Modification allows for management activities that visually dominate the characteristic landscape at all viewing distances. The long term visual result, however, should repeat naturally established line, form, color, and texture, where practicable.

3.2.6 Socioeconomics

This section describes social and economic aspects of the human environment that may be affected by the proposed action. Construction activities at Scofield Dam could affect socioeconomic resources in three ways: water use, recreation, and highway access.

As a water resource, Scofield Reservoir stores an average of 43,229 acre-feet of project water for use by irrigators, municipalities, and other users in Carbon County. At the time of construction, Price and Helper Cities, located southeast of Scofield Reservoir, served the predominantly agricultural economy of the surrounding valley. In recent years however, Price City and the surrounding area have seen increased tourism because of their proximity to historic, scenic, and recreational sites. Consequently, the relative importance of agriculture has declined over time. Nevertheless, agriculture remains an important part of the economy of the area.

Scofield Reservoir serves as a major source of recreation for residents of Utah, Salt Lake, and Carbon Counties. Recreation, the most prominent economic activity in the valley, is largely centered on the reservoir. Based upon visitation information provided by the Utah Division of Parks and Recreation and consumer surplus values from Kaval and Loomis (2003), the total capitalized net present value of recreation associated with Scofield Reservoir is calculated at approximately \$72.1 million.

State Highway 96 crosses the top of the dam, providing access to Scofield, Utah and points beyond. In 2004, the highway had average annual daily traffic (AADT) of about 600 (UDOT 2005).

3.2.7 Cultural Resources

Cultural resources are defined as the expressions of human culture and history in the physical environment, including culturally significant landscapes, historic and archaeological sites, Native American and other sacred places, and artifacts and documents of cultural and historical significance. Historic properties are defined as historic or prehistoric sites, structures, buildings, districts or objects that are listed in or are eligible for the NRHP (National Register of Historic Places). Potential effects of the described alternatives on historic properties are the primary focus of this analysis.

3.2.7.1 Cultural History

The Scofield Dam complex, located in Carbon County, Utah, includes all facilities associated with the dam structure including the gate tower, outlet tunnel and outlet works, spillway, stilling basin, cutoff trench and dam tender's house. The history of Scofield Dam and Reservoir began in 1896 with the establishment of the Mammoth Reservoir Company which began building a dam to capture water for the Price and Castle Valley areas. That dam failed and was abandoned. In 1925 the Price River Water Conservancy District began construction of another dam at what was then called Pleasant Valley Reservoir. Erosion problems plagued the earthen structure and the spillway was lowered for a final time in 1942, reducing the reservoir's capacity to 30,000 acre feet.

During World War II, because of the precarious nature of the dam, it was estimated that its imminent failure could result in severe impact to the war industry from damage to the railroad line adjacent to the reservoir and to the coal mines at Castlegate and Royal downstream. The rail line was a mainline for transporting coal and coke to defense-related facilities in Utah and California. This line also transported civilian passengers and military troops.

In June 1943, President Franklin D. Roosevelt authorized funding for the proposed Scofield Dam project under the Water Conservation and Utilization Act. Reclamation awarded the contract in 1943 and the present dam was constructed from 1944-1946.

An inventory of the dam complex was conducted in 1994 using techniques recommended in the Secretary of the Interior's Standards and Guidelines for historic properties (48 FR 44716). The resulting report (U-96-SJ-0401) is on file at the Bureau of Reclamation Provo Area Office.

3.2.7.2 Cultural Resources Status

The affected environment for cultural resources is identified as the APE (area of potential effects), in compliance with the National Historic Projects Act (36 CFR 800.16). The APE is defined as the geographic area within which federal actions may directly or indirectly cause alterations in the character or use of historic properties. The APE for this proposed action is limited to the treatment area of the highway, bridge, dam complex, spillway, and location of the temporary detour road. During a Class I and Class III cultural resources survey, conducted by the Reclamation archaeologist in 2005, several prehistoric isolated artifacts, including one projectile point, were documented and mapped within the APE.

The dam complex itself has been determined to be a historic property eligible for listing on the NRHP (Weymouth, Polk, and Murray 1997). The dam complex retains integrity of location, design, setting, materials, workmanship, feeling and association and represents a typical government dam construction project undertaken during the first half of the 20th century. The dam construction represents a good example of a rolled earth filled dam, and embodies the distinctive characteristics of 1930's-1940's dam construction. As such, the dam complex is recommended as being eligible to the NRHP. Features which are considered contributing elements to the eligibility of the site include the dam itself and associated gatehouse, outlet works, spillway, stilling basing and cutoff trench as well as the dam tender's house.

The bridge (OD-202) and roadway across the spillway were widened and the original guardrails replaced with Jersey barriers in 1982. The modestly scaled concrete deck girder structure carries State Route 96 over the spillway of the Scofield Dam north of the town of Scofield. The structure's single 38-foot span carries a concrete deck and is supported by concrete abutments. Built in 1944, the bridge was designed and built by the Bureau of Reclamation as an integral part of the dam. The most significant structural alteration associated with the 1982 widening of the roadway was the replacement of the original guardrails. Because of the 1982 modifications, the bridge and roadway are no longer eligible for the NRHP (Utah Historic Bridge Inventory determination).

In accordance with Federal Highway Administration's (FHWA) responsibilities under the Section 4(f) Evaluation and approval for Transportation Projects that Have a Net Benefit to a Section 4(f) Property, a net benefit to the historic dam complex must be established. A "net benefit" is achieved when the transportation use, the measures to minimize harm, and the mitigation incorporated into the project results in an overall enhancement of the Section 4(f) property when compared to both the No Action or avoidance alternatives and its present condition. Net benefits are included in the alternative analysis in Section 3.3.7 of this document. Appendix C, Document 8 identifies potential 4(f) resources.

An on-site inspection of the property by the Provo Area Office archaeologist in 2005 established that the original dam tender's house had been modified on the east end by the water users in the 1960's with the addition of a cinderblock room and attached garage. These additions are not in keeping with the historic design/materials of the original property and are not in good condition.

3.2.8 Paleontological Resources

A Paleontological file search was conducted for the project area by the Utah Geological Survey (UGS). The UGS has determined that there are no known paleontological localities in the project area, and that unless fossils are discovered as a result of construction activities, the project should have no effect on paleontological resources (see Appendix C, Document 1).

3.2.9 Wetlands and Vegetation

Riparian Habitat

A narrow (2 to 4 foot wide) riparian strip exists on both sides of the Price River downstream from Scofield Dam. This strip consists mostly of Nebraska sedge (*Carex nebrascensis*) with a few dispersed young willow (*Salix spp.*). This narrow riparian habitat extends approximately 330 yards below the dam, nearly to a foot bridge that crosses the river. The proposed construction would occur along this reach of the river which has been previously disturbed by dam construction and maintenance activities. Riprap has been placed along the river corridor for approximately 150 feet downstream from the dam. Below this reach and outside of the proposed construction area, the riparian habitat widens to between 50 and 200 yards in width consisting mostly of willow dominated habitat.

Upland Habitat

Both nonnative and native species of vegetation are found within the project area. Upland habitat consist mainly of big sagebrush (*Artemisia tridentata*), rabbit brush (*Chrysothamnus spp.*), and snowberry (*Symphoricarpos oreophilus*). Other species present include yellow sweet clover (*Melilotus officinalis*), houndstongue (*Cynoglossum officinale*), broom snakeweed (*Gutierrezia sarothrae*), golden currant (*Ribes aureum*), wild rose (*Rosa woodsii*), showy gentian (*Frasera speciosa*), basin wildrye (*Elymus cinereus*), Engelmann spruce (*Picea engelmannii*), Rocky Mountain aster (*Aster adscendens*), Indian paintbrush (*Castilleja angustifolia*), and geranium (*Geranium spp.*). Groves of aspen (*Populus tremuloides*) occur higher above the south abutment of the dam.

The area below the dam, designated as the borrow area, consist mainly of crested wheatgrass

(*Agropyron cristatum*), big sagebrush (*Artemisia tridentata*), and rabbit brush (*Chrysothamnus* spp.).

Reservoir Habitat

Wetlands occur around the perimeter of Scofield Reservoir. Jurisdictional waters include the area defined by the high waterline of the reservoir and streams feeding the reservoir.

50% of the reservoir's shoreline consists of willow dominated habitats (U.S. Department of the Interior 2000). These habitats occur mainly along shallower areas where intermittent and perennial creek drainages convey fine textured sediment to the reservoir. A few areas of cottonwood trees exist along the shoreline. Steams entering the reservoir have developed deltas of willow habitat. Mud Creek has the largest of these habitats. These areas do not exist within the construction site, but require relatively stable reservoir levels for sufficient hydrology to support these habitats. Other sections of the reservoir's margin consist of sagebrush, rock, or bare ground.

Exposed reservoir bottom consist of muddy and rocky substrates depending on the topography of the exposed shoreline. These areas of exposed reservoir bottom exist during seasonally low reservoir levels. Large expanses of muddy exposed reservoir bottom typically occur where perennial creek drainages deposit fine textured sediment into the reservoir.

3.2.10 Wildlife Resources

Wildlife resources within the general area of the project include fish; big game; smaller mammals; raptors, water birds, and upland game birds, with a variety of other birds, reptiles, and amphibians.

Fish

Scofield Reservoir supports a significant fishery resource. It has traditionally been one of Utah's top fisheries, providing game fish of desirable quantity and size for both boat and shore anglers. There are 7,800 acre-feet of storage water below elevation 7,586 which allows most fish to survive if the reservoir is drawn down to minimum levels.

The reservoir is managed by the state of Utah as a put-grow-and-take fishery for rainbow trout (*Oncorhynchus mykiss*). Other trout species that occur in the reservoir include brown trout (*Salmo trutta*), and cutthroat trout (*Oncorhynchus clarki*), the latter being the only native trout in the reservoir. Other species that have inhabited the reservoir are kokanee (*Oncorhyncus nerka*) and illegally introduced walleye (*Stizostedion vitreum*).

Non-game fish, including carp (*Cyprinus carpio*), Utah chub (*Gila atraria*) and redbside shiner (*Richardsonius balteatus*) reproduce in the reservoir and serve as forage fish for game species.

A healthy, Blue Ribbon trout fishery (brown, rainbow, and cutthroat trout) exists in the Price River below Scofield Dam.

Big Game

The foothills and mountains surrounding the reservoir are covered mostly with sagebrush, grassland, aspen, and oak communities. This area provides big game habitat for both summer and winter use for deer (*Odocoileus hemionus*) and elk (*Cervus elaphus nelsoni*). Large herds of deer and elk are seen wintering in the general area. Moose (*Alces alces*) are occasionally observed along stream drainages near the reservoir. Mountain lion (*Felis concolor*), black bear (*Ursus americanus*), and coyote (*Canis latrans*) are present in the area.

Small Mammals

Other mammals common within the area include yellow-bellied marmot (*Marmota flaviventris*), badger (*Taxidea taxus*), least chipmunk (*Eutamias minimus*), meadow vole (*Microtus montanus*), northern pocket gopher (*Thomomys talpoides*), deer mouse (*Peromyscus maniculatus*), porcupine (*Erethizon dorsatum*), and striped skunk (*Mephitis mephitis*). Furbearers such as beaver (*Castor canadensis*), mink (*Mustela vison*), and muskrat (*Ondatra zibethicus*) use the wetland and riparian habitat around the reservoir and embankments of the river. The State of Utah lists sensitive species (species of special concern) with a potential to occur within the area, as northern flying squirrel (*Glaucomys sabrinus*), ringtail cat (*Bassariscus astutus*), and River otter (*Lutra canadensis*). Bobcat (*Lynx rufus*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), Uinta ground squirrel (*Spermophilus armatus*), mountain cottontail (*Sylvilagus nuttallii*), and various species of shrews (*Sorex spp.*), voles (*Microtus spp.*), and bats (for example, *Myotis spp.*, *Eptesicus fuscus*) occupy the area.

Raptors

Birds of prey, or raptors, have been observed within or adjacent to the project area. Cottonwood trees along the river provide nesting habitat for raptors such as the golden eagle (*Aquila chrysaetos*), and red-tailed hawk (*Buteo jamaicensis*) and roosting sites for the great horned owl (*Bubo virginianus*) and bald eagle (*Haliaeetus leucocephalus*). Winter months are the best time to view bald eagles near the reservoir. Other raptors observed in the area are the American kestrel (*Falco sparverius*), barn owl (*Tyto alba*), western screech owl (*Otus kennicottii*), snowy owl (*Nyctea scandiaca*), and turkey vulture (*Cathartes aura*).

Water Birds

Numerous water birds occur in the project area such as waterfowl, shore birds, and other wading birds typically associated with wetlands and open water. The reservoir provides high quality habitat for water birds due to the prevalence of emergent wetlands near the mouth of small drainages around the reservoir. These areas provide important forage and cover sites for waterfowl and wading birds.

Scofield Reservoir serves as an important migratory stopover for birds in the fall and spring. Emergent vegetation around the reservoir provides nesting habitat for a variety of waterfowl from mid-March to mid-July. Brood rearing begins mid-July to mid-August. Mud flats exposed in late summer and fall provide foraging areas for shore and wading birds.

Water birds commonly observed include the pied-billed (*Podilymbus podiceps*), eared (*Podiceps caspicus*), and western grebes (*Aechmophorus occidentalis*), gadwall (*Anas strepera*), mallard (*Anas platyrhynchos*), cinnamon teal (*Anas cyanoptera*), northern shoveler (*Spatula clypeata*), lesser scaup (*Aythya affinis*), green-winged teal (*Anas carolinensis*), northern pintail (*Anas*

acuta), common loon (*Gavia immer*), American white pelican (*Pelecanus erythrorhynchos*), and California gull (*Larus californicus*).

Upland Game Birds

Upland game birds occurring in the area include the ring-necked pheasant (*Phasianus colchicus*), sage grouse (*Centrocercus urophasianus*), mourning dove (*Zenaida macroura*), ruffed grouse (*Bonasa umbellus*), blue grouse (*Dendrapagus obscurus*), and California quail (*Lophortyx californicus*). The surrounding area may serve as breeding habitat for sage grouse (*Centrocercus urophasianus*) because of the prevalence of sagebrush habitat.

Other Birds

Probably the most common birds at Scofield Reservoir are swallows. Tree (*Tachycineta bicolor*), violet-green (*Tachycineta thalassia*), northern rough-winged (*Stelgidopteryx serripennis*), and cliff (*Hirundo pyrrhonota*) swallows all occur within the area. Of these, the most abundant are the cliff swallows. Other songbirds including the mountain bluebird (*Sialia currucoides*), yellow warbler (*Dendroica petechia*), and song sparrow (*Melospiza melodia*) have been observed in or near riparian habitats within the area. In open, shrub-dominated habitats goldfinch (*Carduelis tristis*), western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), common nighthawk (*Chordeiles minor*), loggerhead shrike (*Lanius ludovicianus*), white-crowned sparrow (*Zonotrichia leucophrys*), sage thrasher (*Oreoscoptes montanus*), green-tailed towhee (*Pipilo chlorurus*), and rufous-sided towhee (*P. erythrophthalmus*) occur. The red-naped sapsucker (*Sphyrapicus nuchalis*), downy woodpecker (*Picoides pubescens*), western tanager (*Piranga ludoviciana*), and warbling vireo (*Vireo gilvus*) exist in aspen forests. MacGillivray's (*Oporornis tolmiei*), orange-crowned (*Vermivora celata*), Virginia's (*V. virginiae*), and Wilson's (*Wilsonia pusilla*) warblers exist in riparian willow habitat. Another group of birds frequently observed at Scofield State Park comprises the corvids including jays (*Cyanocitta* spp.), the black-billed magpie (*Pica pica*), and the common raven (*Corvus corax*). (U.S. Department of the interior 2000)

Reptiles and Amphibians

Reptiles with potential to occur in the project area include the rubber boa (*Charina bottae*), Utah mountain kingsnake (*Lampropeltis pyromelana*), western yellowbelly racer (*Coluber constrictor*), wandering garter snake (*Thamnophis elegans vagrans*), Great Basin gopher snake (*Pituophis melanoleucus deserticola*), Great Basin rattlesnake (*Crotalus viridis*), milk snake (*Lampropeltis triangulum*), western smooth green snake (*Opheodrys vernalis blanchardi*), regal ringneck snake (*Diadophis punctatus regalis*), northern plateau lizard (*Sceloporus undulatus elongatus*), sagebrush lizard (*S. graciosus*), northern tree lizard (*Urosaurus ornatus*), and the Great Basin Whiptail (*Cnemidophorus tigris tigris*). Amphibians with potential to occur in the planning area include boreal chorus frog (*Pseudacris triseriata*), northern leopard frog (*Rana pipiens*), Arizona tiger salamander (*Ambystoma tigrinum nebulosum*), Great Basin spadefoot toad (*Scaphiophus intermontanus*), boreal toad (*Bufo boreas*), and Woodhouse's toad (*Bufo woodhousei*). (U.S. Department of the Interior 2000)

3.2.11 Threatened, Endangered, Candidate, and State Sensitive Species

Federal agencies are required to ensure that any action federally authorized or funded would not

adversely affect a federally listed threatened or endangered species.

Several species listed as threatened or endangered do occur within Carbon County or within the Price River Drainage. These species are discussed below.

Ute ladies'-tresses (*Spiranthes diluvialis*) (Threatened), a small orchid, is usually found along stream margins or bogs. It is not known to occur around Scofield Reservoir or below the dam. The bald eagle (*Haliaeetus leucocephalus*) (Threatened) is a winter resident of the area. This species roosts primarily in forested canyons or tall cottonwoods along streams and reservoirs. The whooping crane (*Grus americanus*) (Endangered) migrates through Utah during the spring and fall. There are no resident populations in Utah. Canada Lynx (*Lynx canadensis*) (Threatened), although they have not been seen, could possibly use forested areas and wetlands within the area.

The State of Utah maintains a list of sensitive species (species of special concern) with a potential to occur within the area. These species include the northern flying squirrel (*Glaucomys sabrinus*), ringtail cat (*Bassariscus astutus*), and River otter (*Lutra canadensis*). The Price River downstream of the confluence with the White River has populations of flannelmouth sucker (*Catostomus latipinnis*) and bluehead sucker (*Catostomus discobolus*).

The Price River below Scofield Dam is a tributary of the Green River. The Green River Drainage supports four endangered fish species. These are the Colorado pikeminnow (*Ptychocheilus lucius*) (Endangered), humpback chub (*Gila cypha*) (Endangered), bonytail (*Gila elegans*) (Endangered), and razorback sucker (*Xyrauchen texanus*) (Endangered). Of the four species, only the Colorado pikeminnow has been found in the lower reach of the Price River.

3.2.12 Land Use

Scofield Dam and Reservoir are located in unincorporated Carbon County, Utah. Carbon County has the area designated as a watershed zone and the permitted uses include camping, grazing of livestock, and other uses as described in the county code. As stated above, the Scofield Reservoir and adjacent lands are a state park administered by the Utah State Parks and Recreation under agreement with Reclamation.

3.2.13 Prime and Unique Farmland

Currently, there are no farmlands located within the project limits or near the Scofield Reservoir; no further analysis is required.

3.2.14 Pedestrian and Bicyclists

There are several hiking and biking trails near the project area and Scofield Reservoir. There are no sidewalks associated with the existing road within the project limits.

3.2.15 Air Quality

Air quality is regulated by the U.S Environmental Protection Agency and the Utah Division of Air Quality. The EPA has established the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act which specify amounts of air pollutants for carbon monoxide, particulate matter (less than 2.5 micrometers), ozone, sulfur dioxide, lead, and nitrogen. Carbon County is in attainment for all criteria pollutants according to standards set by the EPA.

An Approval Order from the Utah Division of Air Quality may be required prior to implementing the proposed action. The purpose of this permit is to control fugitive dust and emissions during construction.

3.2.16 Noise

The proposed action would not increase the traffic capacity of the roadway and would be constructed on essentially the same alignment. In addition, there are no noise receivers within the project corridor.

3.2.17 Construction Impacts

As described above, the Proposed Action includes the reconstruction of the Scofield Dam spillway and bridge over the spillway. In addition, minor improvements would be made to the approach roadways across the dam. These improvements would disrupt traffic flow during construction. A detour would be provided allowing for continued use of the roadway during construction.

The maintenance of at least one lane of traffic would be required at all times during the construction phase of this project. A detailed traffic control plan would also be required. This plan would need approval by UDOT.

Several options are being evaluated for the detour road during construction of the bridge. The detour would be removed following the completion of bridge and associated approaches. The area disturbed by the detour would be restored to its current state.

3.3 Environmental Consequences

Under any alternative, all construction would occur within the dam primary jurisdiction zone, and normal stream-flow releases would not be affected by construction.

3.3.1 Recreation

3.3.1.1 No Action Alternative

Under the No Action Alternative, continued spillway deterioration is expected until the dam, bridge and highway safety; water storage; and resultant recreation uses are compromised. The long term result could be the reduction of water storage, short duration flow releases, and the proportional loss of existing recreation visitation and water related recreational opportunities.

3.3.1.2 Action Alternatives

3.3.1.2.1 Spillway Replacement

This alternative could result in a temporary impact to anglers below the dam, because the Primary Jurisdiction Zone would likely be closed to public access for construction staging and spillway repair activities. Upon completion of the spillway improvements, the area below the dam would be restored to its pre-project conditions and the public would be allowed to continue using the access road parking area, restroom, and fishing bridge for recreation purposes. The repair is expected to enhance the long term benefits to the recreation resource by maintaining the dam, and appurtenances.

3.3.1.2.2 Downstream Detour of SR-96

Construction activities could impose a temporary impact to anglers below the dam, as the Primary Jurisdiction Zone would likely be closed to public access and staging activities during reconstruction. Upon completion of the spillway improvements, the detour route through the area would be removed and the area would be returned to its pre-project condition. Recreation uses, including public use of the fisherman access road, parking areas, restroom, and fishing bridge would continue.

3.3.2 Water Resources

3.3.2.1 No Action Alternative

The No Action Alternative would have no impact on the water resources including water rights. In the event of dam failure, the No Action Alternative could leave water customers liable for property damages and exposed to the risk of losing all project benefits.

This alternative could alter Scofield Dam operations in the future by not allowing the use of the spillway. This could occur if the spillway is deemed completely unsafe. This would affect how much, when or if water is stored in the reservoir and therefore affect the water users downstream

who depend on the water for agricultural and M&I uses. When considering the probable maximum flood (PMF) there would be even fewer opportunities to store water in the reservoir because there would be no space available to absorb the impacts of a large event flood such as the PMF.

3.3.2.2 Action Alternatives

3.3.2.2.1 Spillway Replacement

This Alternative may result in a reduction in the reservoir level during construction. Construction would be scheduled in the fall to minimize any restriction in reservoir operations. In the event of higher than normal winter precipitation, some additional coordination with the CWCD may be required. However, no significant operational impacts to water resources or deliveries of water would be anticipated from this alternative.

3.3.2.2.2 Downstream Detour of SR-96

Impacts from this alternative would be the same as the Spillway Replacement Alternative.

3.3.3 Water Quality

3.3.3.1 No Action Alternative

Since no construction would occur, there would be no temporary construction-related water quality impacts and no long-term water quality impacts. If the dam were to fail, water quality would be negatively affected for several months. A significant amount of sediment would be moved downstream.

3.3.3.2 Action Alternatives

Under all Action Alternatives, appropriate Clean Water Act permits would be obtained prior to construction as specified in Table 1-2.

3.3.3.2.1 Spillway Replacement

Under this Alternative, best management practices would be employed during construction activities to minimize impacts to water quality in Scofield Reservoir and in the Price River downstream. This Action Alternative allows for much of the construction to occur when water levels are usually low in the fall, without requiring additional drawdown to very low levels. Any water quality impacts would be minor and temporary. There would be no long-term or permanent impacts upon water quality.

During the construction period, if the reservoir were drawn down and operated at levels well below what would be expected to do the work, the hydraulic detention time and flushing rates could be temporarily changed. Operating the reservoir at a very low level (which is unlikely) could increase the passage of suspended sediment and nutrients downstream. It could also temporarily produce more significant algae blooms, but this would not have a long-term or

permanent impact upon water quality in the reservoir or downstream.

Water quality impacts during construction of the roadway could result from soil erosion caused by excavation, grading, and other construction activities. The potential for these impacts would remain until construction was complete, and permanent erosion control measures, such as seeding, were installed, and the site stabilized. Mitigation for these impacts consists of best management practices, including temporary erosion control structures, seeding, etc., to prevent erosion and sediment from entering waterways.

3.3.3.2.2 Downstream Detour of SR-96

Under this Alternative, the impacts on water quality would be the same as under the Spillway Replacement Alternative, but in addition there may be temporary impacts on turbidity in the Price River immediately downstream from the temporary Highway 96 detour stream crossing. This turbidity would result from the installation and removal of the corrugated pipes used as culverts across the Price River. In addition, there may be temporary localized erosion and runoff along the detour road in the vicinity of the stream crossing and subsequent impacts on turbidity in the Price River. However, the temporary road would be constructed using best management practices to minimize erosion and runoff impacts to the river. There should be no significant long-term or permanent impacts upon water quality from the temporary highway.

3.3.4 Public Safety, Access, and Transportation

3.3.4.1 No Action Alternative

The No Action Alternative would have no effect on access, transportation, or public safety in the short term. Eventually, it would become necessary to enforce a weight limit restriction on the bridge due to the concrete deterioration. This would negatively affect commerce including coal hauling.

If the bridge threatened failure, it would not be safe or maybe not even possible to allow traffic to access the bridge. Also, the bridge could fail while a heavy load was crossing and stressing the bridge beyond what it could take. If the bridge failed completely, all types of vehicles, passenger, or large trucks hauling coal would have to take a different route. The only other paved road to the area south of the dam is SR 264 to Fairview, Utah.

3.3.4.2 Action Alternatives

3.3.4.2.1 Spillway Replacement

Under this Alternative, traffic delays on SR-96 could be expected during the modification work on Scofield Dam. Estimated delay time due to detour is 15 minutes. The road would be closed for spillway, roadway, bridge, retaining wall and other needed reconstruction. This would last approximately 6 months. The one way traffic would be controlled with flaggers and/or signals.

All modification work for the dam, road, and bridge would be completed under one Reclamation

construction contract, which should serve to minimize traffic delays.

With the relocated highway in place, spillway modifications would have no effect on access, transportation, or public safety.

3.3.4.2.2 Downstream Detour of SR-96

Impacts from this alternative would be the same as the Spillway Replacement Alternative.

3.3.5 Visual Quality

3.3.5.1 No Action Alternative

Without repair, continued future spillway deterioration is expected until the dam, highway safety, water storage, and resultant visual resource are compromised. The long term result could be the reduction of water storage, short duration out flows and consequent impairment of the visual resource around the reservoir, displaying barren un-vegetated reservoir bottom slopes.

3.3.5.2 Action Alternatives

3.3.5.2.1 Spillway Replacement

The proposed reconstruction activity meets the long-term VQO as determined by the Scofield RMP and is expected to maintain the long term visual character of the reservoir. Construction activities would be temporary. The routing of traffic across the face of the dam during reconstruction activities would be expected to reduce visual impacts, as opposed to opening up of a separate bypass corridor. Visual evidence of the borrow area is expected to remain noticeable up to five years after rehabilitation while vegetation becomes re-established and reduction in contrasting line, form, color, and texture occurs. The difference in appearance between the new and old spillways is not expected to draw attention for the average visitor passing through the area.

3.3.5.2.2 Downstream Detour of SR-96

Short term results of the reconstruction activity are expected to be obvious and visually dominant in the foreground view, through completion of the project. Long term visual quality is expected to meet objectives outlined in the Scofield RMP; however, visual disturbance resulting from the bypass road is expected to compound the visual disturbance below the dam. Visual evidence of the bypass road and borrow area are expected to remain noticeable up to five years after rehabilitation while vegetation becomes re-established and reduction in contrasting line, form, color, and texture occurs.

3.3.6 Socioeconomics

3.3.6.1 No Action Alternative

Under the No Action Alternative, there would be no socioeconomic impacts in the short term. In the event of future dam failure, approximately \$363 billion in property and project benefits would remain at risk.

3.3.6.2 Action Alternatives

3.3.6.2.1 Spillway Replacement

The Spillway Replacement Alternative would result in restoration of the full capacity of the dam, so there would be no measurable long-term effects to socioeconomics. The Spillway Replacement Alternative would result in no benefit/cost for recreation, irrigation, M&I water supply, or commercial interests. Economic costs to transportation would amount to \$590,625. Under this alternative, effects to socioeconomics such as recreation, reservoir yield, traffic, commerce, and construction are discussed below.

Recreation

The reservoir's water elevation would be restricted 10 feet lower than the reservoir's maximum elevation under normal operating conditions. This restriction would have no significant impacts on recreation.

Reservoir Yield

Under the Spillway Replacement Alternative, no significant impacts on the M&I or irrigation water supply would be expected. Although the reservoir water elevation would be restricted to 10 feet lower than the reservoirs maximum elevation under normal operating conditions, this would not have an effect on water deliveries.

Transportation

Under the Spillway Replacement Alternative, temporary traffic delays are expected. Traffic would be reduced to a one lane, one-way detour with low speeds. Residents traveling to and from the city of Scofield and mining trucks using the road diversion would experience minimal delays. It is estimated that these temporary delays would cause approximately 13,500 minutes of delays daily over a period of 20 weeks. Using UDOT's method for valuing hours, the total value of hours lost to traffic delays would amount to approximately \$590,625. The minimal traffic impacts would not be expected to have any additional effects beyond those quantified in Public Safety, Access, and Transportation (Section 3.3.4).

Commerce

No measurable effect to the commercial sector would be expected from implementation of the Proposed Action Alternative. It is expected however that because of the temporary detour and lane restriction, minimal delays would result. These delays would have a minimal impact on commercial trucking (e.g. coal trucking). The minimal traffic impacts would not be expected to have any additional effects beyond those quantified in Public Safety, Access, and Transportation (Section 3.3.4).

Construction

Construction activities would represent an infusion of additional capital into the areas economy,

and could therefore be classified as a short-term benefit.

3.3.6.2.2 Downstream Detour of State Highway 96

Impacts from this alternative would be the same as the Spillway Replacement Alternative.

3.3.7 Cultural Resources

3.3.7.1 No Action Alternative

Under the No Action Alternative, there would be no effect to this historic property. Reclamation would not structurally or visually modify the dam to reduce the risks created by the spillway deficiency of the dam. The existing dam and bridge would remain in place and standard operating procedures would continue. However, if the spillway and/or the dam were to fail many historic properties, including most of the dam complex itself, would be destroyed.

3.3.7.2 Action Alternatives

3.3.7.2.1 Spillway Replacement

Under the Spillway Replacement Alternative, the spillway and gatehouse reconstruction would be consistent with existing size, design, and location of the historic structure. Therefore, the integrity of the location, design, setting, feeling and association would remain the same. However, the demolition of both the gatehouse and the spillway would constitute an adverse effect to these historic features which are part of the dam complex. The historic interior workings of the gatehouse would be retained in place. With consideration for the transportation use, and measures to assure public safety, according to 36 CFR 800.6(b) resolution of the adverse effects would be mitigated through further documentation and photographs, adhering as much as possible to the size, design, location, and materials of the original features, and continued consultation with SHPO. The Advisory Council on Historic Preservation (ACHP) would be invited to join in the consultation. In compliance with 800.6(b)(1)(iv), a Memorandum of Agreement (MOA) would be executed stipulating the resolution of the adverse effects.

Under the Section 4(f) Evaluation and Approval for Transportation Projects that Have a Net Benefit to a Section 4(f) Property, a net benefit result would be the replacement of the spillway because it could prevent future hydraulic jacking, and possibly dam failure resulting in the destruction of Utah State Highway 96. Replacement of the crumbling concrete now present would reinforce and strengthen the spillway. A detailed evaluation is found in Appendix C, Document 8 is the report "Identification of Potential Section 4(f) Resources."

The new gatehouse, which sits on the bridge over the dam on Utah State Highway 96, would be placed in the same location as the original gatehouse, have the same setting, feeling and association to the rest of the dam complex. It would be the same size and be designed as closely as possible to the historic metal and concrete structure. The old concrete on the historic gatehouse is crumbling at the base of the present structure which is elevated above and hangs out over the reservoir water. Age, close and constant traffic vibration, including large coal trucks,

and freeze-thaw action is increasing the deterioration of the concrete supporting the buildings foundation which could cause an unsafe structure in the near future. The building houses the original gate-operation mechanism which will remain functional and in place. The replacement of the crumbling historic concrete base, and the advantage of safely being able to park a vehicle for the dam tender will provide a net benefit to the future stability of this structure and to maintaining the overall historic integrity of the dam complex.

If the spillway is shifted up to 20 feet to the north of its current location, the new spillway would follow the size and design of the historic structure. The Determination of Eligibility and Effect for the historic properties would remain the same as in this section. Compliance with NHPA regulations under Section 106 and the FHWA net benefit agreement stipulations would remain the same.

3.3.7.2.2 Downstream Detour of SR-96

In addition to the conditions to terms agreed to for the Spillway Replacement Alternative (3.3.7.2.1), the Downstream Detour Alternative would include a temporary road to be placed between the dam tender's house and the railroad tracks to the south. To avoid damage to the house, jersey barriers would be placed between the house and the new road during construction and use. Monitoring during construction by the Provo Area Office archaeologist would be conducted.

Grading and use of the temporary detour road would disturb an area near the river where prehistoric isolated artifact materials are located on the surface. The artifacts are not eligible for the National Register of Historic Places (NRHP). However, they may be an indication of a subsurface archaeological site. Monitoring during construction by the Provo Area Office archaeologist would be conducted.

3.3.8 Paleontological Resources

3.3.8.1 No Action Alternative

Under the no action alternative there would be no effect to paleontological resources.

3.3.8.2 Action Alternatives

3.3.8.2.1 Spillway Replacement

Under this alternative there would be no effect to paleontological resources.

3.3.8.2.2 Downstream Detour of SR-96

Under this alternative there would be ground-disturbing activities which have the potential to expose buried fossil material. The Provo Area Office archaeologist could monitor during construction to be certain there is no damage to paleontological resources. If none of these types of fossil remains are exposed during construction, there would be no effect to paleontological resources from this alternative.

3.3.9 Wetlands and Vegetation

3.3.9.1 No Action Alternative

Under the No Action Alternative, no immediate impacts to wetland vegetation would occur. If the dam were to fail, however, all downstream wetlands would be washed out immediately. Perimeter wetlands would persist until the lowered water table no longer supported the hydrophytes (vegetation growing only in water or very wet soil), after which plant life would be replaced naturally over time by upland plant species.

3.3.9.2 Action Alternatives

3.3.9.2.1 Spillway Replacement

Under this alternative, there would be minimal effects to native riparian, wetland, or upland vegetation. Most areas within the construction zone have been disturbed previously. Additionally, changes in reservoir levels would take place under near normal reservoir operations and there would be no long-term lowering of the reservoir, thus no wetlands would be significantly affected surrounding the reservoir's margin.

A small area of approximately 0.1 acre of riparian habitat would be disturbed. This area and all other areas of disturbed vegetation would be recontoured and reseeded with native plants following construction activities. All necessary permits would be obtained for work occurring in these areas.

3.3.9.2.2 Downstream Detour of SR-96

Effects to wetlands and vegetation would be similar to those described under the Spillway Replacement Alternative above. The proposed construction of a detour road in this alternative would remove three to five acres of upland habitat as well as a grove of willows near the public restrooms and foot bridge. This grove is approximately 200 feet long by 50 feet wide and extends along the north shore of the river. Any riparian habitat within the proposed alignment of

the detour crossing the river would be obliterated. This would remove only a very small area of riparian habitat (less than a tenth of an acre).

3.3.10 Wildlife Resources

3.3.10.1 No Action Alternative

Under the No Action Alternative, there would be no significant effect to wildlife species and no significant effect to their habitat unless the dam were to fail. The reservoir water would continue to stratify, affecting fish in the reservoir and at times those in the Price River immediately downstream from the dam when the reservoir level was very low.

If the dam were to fail, negative effects would occur to shoreline vegetation, open water, and wildlife species closely associated with riparian habitat of the reservoir. As these areas dry up over time, wildlife habitat would be lost, resulting in a significant loss of fish, water birds, and other species dependent upon the reservoir.

3.3.10.2 Action Alternatives

3.3.10.2.1 Spillway Replacement

Under this alternative, there would be beneficial effects to wildlife that depend on the reservoir. Adding stability to the dam would ensure continuation of shoreline riparian and open water habitat for fish and wildlife species.

During construction, temporary negative impacts could occur to golden eagles and other wildlife species that use the immediate area. Impacts to golden eagles are expected to be minimal. Their courting and breeding season extends from February to August. There are no known nesting sites near proposed construction activities. If the proposed action is implemented, SOD construction work on the dam is scheduled to begin in the spring of 2006. Construction activity could cause stress and discomfort to some wildlife species from noise, dust, displacement, and temporary loss of habitat, until construction was completed and impacted areas are revegetated. Reservoir water stratification would continue under the Spillway Replacement Alternative, and effects to reservoir fish would be the same as those under the No Action Alternative.

Construction activities in the dam's spillway and outlet works could release sediment to the river. This would displace fish downstream until sediment and suspended matter settles out of the water. The river below the dam has been designated as a blue ribbon fishery. Increased sedimentation or disruption of flows in the fall would interfere with brown trout spawning and potentially reduce the quality of this fishery for a season. Fish would also be displaced downstream when reservoir water releases are discontinued during some phases of construction.

Best management practices would be employed during construction activities to minimize impacts to the river's water quality below the dam. This would include a dewatering system consisting of wells, sumps, and a sedimentation pond to limit sedimentation of the river.

3.3.10.2.2 Downstream Detour of SR-96

Effects to wildlife resources would be similar to those described under the Spillway Replacement Alternative above. However, the construction of the river crossing would entrain more sediment to the river than the Spillway Replacement Alternative. This construction would extend the duration of downstream fish displacement. The fish community would return to preconstruction levels after the river detour crossing is removed, recontoured, and revegetated.

Terrestrial wildlife existing in the area would be temporarily displaced from the area during construction. Less than an acre of habitat may be temporarily disturbed. This habitat would be revegetated to near preexisting conditions after the detour is no longer needed.

3.3.11 Threatened, Endangered, Candidate, and State Sensitive Species

3.3.11.1 No Action Alternative

The No Action Alternative would result in no effect to threatened, endangered, candidate, or state sensitive species. However, if the dam were to fail in the future, negative impacts due to loss of habitat from excessive erosion and sedimentation of the river drainage could occur.

3.3.11.2 Action Alternatives

3.3.11.2.1 Spillway Replacement

Because the Spillway Replacement Alternative consists of short term construction confined to the immediate vicinity of Scofield Dam and Reservoir, there may be minimal effects to threatened, endangered, candidate, or state sensitive species; however these effects would not adversely affect these species' ability to carry out their normal ecological activities.

Bald eagles may be temporarily displaced from roost sites during construction activities.

Therefore, this alternative may affect, but is not likely to adversely affect the Ute ladies'-tresses (*Spiranthes diluvialis*), bald eagle (*Haliaeetus leucocephalus*), or Colorado pikeminnow (*Ptychocheilus lucius*). The U.S. Fish and Wildlife Service concurred with this determination in their letter dated November 22, 2005. (see Appendix C, Document 7).

Should project activities occur within 0.5 miles of a bald eagle roosting site during winter roosting months (approximately November – March), construction activities should be scheduled during daylight (non-roosting) hours, with activities beginning after 9:00 am and terminating at least one hour prior to official sunset.

3.3.11.2.2 Downstream Detour of SR-96

Effects to threatened and endangered species would be the same as those described under the Spillway Replacement Alternative above.

3.3.12 Land Use

Neither of the proposed alternatives would impact or change land use in the area.

3.3.13 Prime and Unique Farmland

Neither of the proposed alternatives would impact farmland in the area.

3.3.14 Pedestrians and Bicyclists

Under both action alternatives, construction of the new section of road would provide a four foot shoulder sufficient for bicycle transportation. This would improve current conditions for bicycle travel. None of the proposed alternatives would impact or change any pedestrian access in the area.

3.3.15 Air Quality

Since no roadway capacity will be added with the project, air quality impacts are anticipated to be limited to short term increases of fugitive dust caused by construction. Best management practices (i.e. watering for dust control) to minimize fugitive dust will be implemented.

3.3.16 Noise

Construction activities would create short term noise impacts within the area.

3.3.17 Construction Impacts

3.3.17.1 No Action Alternative

Under this alternative, no construction would be authorized and no construction impacts would occur.

3.3.17.2 Action Alternatives

3.3.17.2.1 Spillway Replacement

Proposed improvements associated with this alternative would disrupt traffic flow during construction.

3.3.17.2.2 Downstream Detour of SR-96

Effects would be the same as those described under the Spillway Replacement Alternative above.

3.4 Indian Trust Assets

Indian trust assets are legal interests in property held in trust by the United States for federally recognized Indian tribes or individual tribal members. Examples of things that may be trust assets are lands, mineral rights, hunting, fishing, or traditional gathering rights, and water rights. The United States, including all of its bureaus and agencies has a fiduciary responsibility to protect and maintain rights reserved by or granted to Indian tribes or individual tribal members by treaties, statutes, and Executive Orders, which are sometimes further interpreted through court decisions and regulations. This trust responsibility requires the Federal government to take all actions reasonably necessary to protect trust assets, in accordance with the Secretary of the Interior's Principles for Managing Indian Trust Assets in 303 DM 2.

Implementation of any of the proposed alternatives analyzed above would have no effect on Indian trust assets. Tribal consultation for the proposed action was undertaken on August 18, 2005, with a letter sent to the Northern Ute tribe in Fort Duchesne, Utah. No concerns regarding Indian trust assets have been communicated by this tribe.

3.5 Environmental Justice

Executive Order 12898 established environmental justice as a federal agency priority to ensure that minority and low-income groups are not disproportionately affected by federal actions. Scofield Dam is located in Carbon County, and the project area for the proposed action is the dam and immediate vicinity. As of 2000, the population of Carbon County was 20,422 including 2,664 individuals living below poverty level and 2,751 individuals belonging to various minority groups. The population of Scofield, the town closest to the project area, was 22 consisting of zero individuals living below poverty level and zero individuals belonging to various minority groups. Statistics for the year 2000 are the most recent available (Utah Governor's Office of Planning and Budget) .

Implementation of any of the action alternatives would not disproportionately (unequally) affect any low-income or minority communities near the project area. The proposed action would involve some short term impacts to the general public from transportation delays (see sections 3.3.4 and 3.3.6). The proposed action would not involve population relocation, health hazards, hazardous waste, property takings, or substantial economic impacts. The proposed action would therefore have no adverse effects to human health or the environment that would disproportionately affect minority and low-income populations.

3.6 Summary of Environmental Consequences

Table 3.1 summarizes environmental effects under the No Action Alternative and the Action Alternatives.

Table 3.1 Summary of Environmental Consequences

Resource Issue	Alternatives		
	No Action	Spillway Replacement	Downstream Detour of SR-96
Recreation	Loss of Recreational Opportunities	Temporary Restriction of Recreational Opportunities	Temporary Restriction of Recreational Opportunities
Water Resources	Dam failure would cause loss of storage and the delivery system	No significant impacts	No significant impacts
Water Quality	Dam failure would cause erosion and sediment loading and turbidity downstream for several months.	Minimal/Temporary Effect	Minimal/Temporary Effect
Public Safety, Access, and Transportation	An eventual weight restriction would limit commercial trucking, and eventually the road may be closed	Traffic Delays for 6 months between 2006 and 2007	Traffic Delays for 6 months between 2006 and 2007
Visual Quality	Impairment of Visual Quality	Minimal Impairment of Visual Quality	Minimal Impairment of Visual Quality
Socioeconomic Resources	No Effect, \$363 Billion in property and benefits would remain at risk	Minimal Effect	Minimal Effect
Cultural Resources	Dam failure would cause loss of historic structure	Adverse Effect to be mitigated through MOA with SHPO	Adverse Effect to be mitigated through MOA with SHPO including monitoring
Paleontological Resources	No Effect	No Effect	No Effect with monitoring
Wetlands and Vegetation	Eventual Impairment of Wetlands	Minimal Effect	Minimal Effect
Wildlife Resources	Dam failure would effect wildlife habitat within the reservoir and downstream	Temporary Effects	Temporary Effects
Threatened and Endangered Species	Dam failure would effect habitat of Threatened and Endangered Species	May Affect, not likely to adversely affect Threatened and Endangered Species	May Affect, not likely to adversely affect Threatened and Endangered Species

3.7 Cumulative Effects

In addition to project specific impacts, Reclamation analyzed the potential for significant cumulative impacts to resources affected by the project and by other past, present, and reasonably foreseeable activities in the watershed. According to the Council on Environmental Quality's regulations for implementing NEPA (50 CFR §1508.7), a “cumulative impact” is an impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. It focuses on whether the Proposed Action, considered together with any known or reasonable foreseeable actions by Reclamation, other Federal or State agencies, or some other entity combined to cause an effect. There is no defined area for potential cumulative effects.

No known or planned projects in the vicinity of Scofield Reservoir would impact this project. Based on Reclamation resource specialists’ review of the proposed action to modify the dam and spillway to meet safety standards, Reclamation has determined that the proposed action would not cumulatively affect any resources.

